

What is claimed is:

1. A method for credit recovery of lost frames in an in-line credit extender coupled between a remote device  
5 and a local device, comprising:  
comparing received frame count and a first programmed  
counter value when BB-SCs are received;  
loading the difference between the programmed counter  
value and the received frame count into a buffer and to  
10 a first counter that counts each frame that is  
transmitted; and  
sending BB-SCs to the local device if there is a match  
between the first counter value and a second programmed  
counter value.
- 15 2. The method of Claim 1, wherein the first and the second  
programmed counter values are the same.
3. The method of Claim 1, wherein number of buffer credits  
lost are determined by the difference between the first  
or second programmed counter value and the received  
20 frame count.
4. A system for credit recovery of lost frames in an in-line credit extender coupled between a remote device  
and a local device, comprising:  
a first counter for counting received frames;

- a first programmable counter that is programmed with a value;
- a comparartor for comparing the first counter and the first programmable counter value when BB\_SCs are received; and
- 5 a second counter for counting transmitted frames.
5. The system of Claim 4, further comprising:
- a second programmable counter whose value is compared to the second counter and if there is a match between
- 10 the two values, BB-SCs are sent to the local device.
6. The system of Claim 5, wherein the difference between the first counter value and first programmable counter value is loaded into a buffer and sent to the second counter that counts transmitted frames.
- 15 7. A method for credit recovery of lost R\_RDYs in an in-line credit extender coupled between a remote device and a local device, comprising:
- counting received R\_RDYs, wherein a first counter counts the received R\_RDYs;
- 20 setting a flag when a BB\_SCr is received; and
- transmitting BB-SCr when the first counter value is zero and the flag is set.
8. The method of Claim 7, further comprising:
- counting R\_RDYs after BB\_SCrs are received, wherein a
- 25 second counter counts the R\_RDYs; and

transmitting R\_RDYs when the second counter value is non-zero.

9. The method of Claim 7, wherein the first counter value is decreased everytime an R\_RDY is transmitted.
- 5 10. The method of Claim 7, wherein the flag is cleared after a BB\_SCr is transmitted.
11. The method of Claim 8, wherein the second counter is decremented everytime an R\_RDY is transmitted.
12. A system for credit recovery of lost R\_RDYs in an in-  
10 line credit extender coupled between a remote device and a local device, comprising:  
a first counter for counting received R\_RDYs;  
a second counter for counting R\_RDYs received after BB\_SCrS are received; and  
15 a R\_RDY control module that transmits R\_RDYs when the first counter value is non-zero.
13. The system of Claim 12, further comprising:  
a register that sets a flag when a BB\_SCr is received;  
and  
20 a BB-SCr control module that transmits BB\_SCrS when the first or second counter value is zero.
14. The system of Claim 12, wherein the first and second counter flip based upon when an R\_RDY is received.